

**BERYLSIMPSONIA (ASTERACEAE: MUTISIEAE), A NEW GENUS OF THE
GREATER ANTILLES**

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ABSTRACT

Berylsimpsonia B.L. Turner, a new genus from the Greater Antilles (Cuba, Dominican Republic, Haiti, and Puerto Rico) is described. It is comprised of two species: **B. vanilloσμα**, the generitype, previously assigned to the genus *Proustia* or *Acourtia*; and **B. crassinervis**, previously assigned to *Proustia*. *Berylsimpsonia* is characterized by its clambering or viney, woody habit, bifurcate, recurved, pseudostipulary spines, yellow corollas, rounded style branches, and fusiform achenes with 5-9 ribs. In total characters it appears closest to the genus *Trizis* but is readily distinguished from that genus by its unique habit, rounded style branches, and graduate involucre. A table contrasting the more important megamorphic features of *Acourtia*, *Berylsimpsonia*, *Proustia*, and *Trizis* (s.s.) is provided, along with a map showing the distribution of the two species of *Berylsimpsonia*.

KEY WORDS: Asteraceae, Mutisieae, *Acourtia*, *Berylsimpsonia*, *Proustia*, *Trizis*

Preparation of a treatment of *Acourtia* for México and Central America (Turner, in prep.) has occasioned the present paper, bringing to the fore the status of *Proustia vanilloσμα* C. Wright, largely because the latter was recently transferred into the genus *Acourtia* by Crisci (1974), the name having been picked up by Karis *et al.* (1992; p. 422, Fig. 12D). Prior to this taxonomic realignment most workers retained the species concerned in *Proustia* (Fabris 1968).

Crisci (1974), in connection with his numerical study of the Mutisieae, attempted to justify his transfer of *Proustia vanilloσμα* (including *P. crassinervis*) into *Acourtia* with the following statement:

This is a species of scandent shrubs endemic to the islands of Cuba, Santo Domingo, and Puerto Rico. The only other genus of Nassauviinae occurring in this area is *Trixis*. The position of this species in *Proustia* is doubtful because of its yellow flowers, type of style, exine stratification, and its geographical distribution disjunct from other species of *Proustia* which occur in southern South America. Hoffmann (1893: 343) pointed out that *P. vanillosma* differs from the other species of *Proustia* in having a different type of style. The results of the numerical study show that this taxon is close to *Acourtia glomeriflora* (= *Gochnatia glomeriflora*) and to the genus *Acourtia* in general. There is a gap between *Acourtia* and *P. vanillosma* in habit and in flower color, but the position of this species in *Acourtia* seems to be a natural one, representing a branch of this genus in the West Indies.

In short, Crisci transferred *Proustia vanillosma* into *Acourtia* because his numerical analyses showed the taxon to be close to *Acourtia glomeriflora* (A. Gray) Reveal & King. This does not appear likely, however, since the latter species is a stiffly erect unarmed suffruticose herb or shrublet with mostly actinomorphic pink corollas (but occasionally zygomorphic).

In my opinion, were a more informative cladistic analysis performed (as opposed to a numerical analysis) using the characters emphasized by Crisci (but perhaps with a wider grasp of the variation found in *Acourtia*), it is likely that *Proustia vanillosma* would cluster with or near *Trixis* (s.s.). Clambering, more or less shrubby vines occur in the latter genus (e.g., *T. divaricata* Spreng.), and their florets are uniformly bilabiate, yellow, and produce fusiform achenes with 5-9 clearly discernible ribs. *Proustia vanillosma*, however, differs from *Trixis* (s.s.) in having persistent, bifurcate, pseudostipulary spines at each node, and apically rounded or broadly obtuse style branches (vs. truncate).

In short, inclusion of *Proustia vanillosma* makes little or no phyletic or "numerical" sense if positioned among the approximately 70 species of *Acourtia*, all of which are confined to the mainland areas of North America. Indeed, considering its size, *Acourtia* is a remarkably uniform genus, both as to habit, head structure and floral morphology, although Cabrera (1992) has proposed, after cladistic analysis, that the approximately fifteen scapose elements of *Acourtia* be segregated as a distinct genus, a proposal that makes no taxonomic sense to me, largely because these cannot be readily related to any element of the Mutisieae other than *Acourtia*. Unfortunately, she did not account for *Proustia vanillosma* in her cladistic analysis.

In light of the above discussion I find it most reasonable to elevate *Proustia vanillosma* (and the very closely related *P. crassinervis*) to generic status, giving it the name *Berylsimpsonia*, after Dr. Beryl Simpson, monographer of the genus *Perezia*, from which *Acourtia* was removed. She is currently

Chairman of the Department of Botany at the University of Texas, Austin and fully deserving of the honor intended. Unfortunately (or fortunately, perhaps) the name *Simpsonia* has already been applied to a genus of Australian palms. In many ways the personality of the honored fits her namesake, since she is tenacious in her research, scratchy when boldly encountered, and enigmatic as to philosophical, if not phyletic, perambulations.

KEY TO *BERYLSIMPSONIA* AND RELATED GENERA

1. Achenes obpyramidal, ribless; plants with thorns formed by foreshortened stems; South America. *Proustia*
1. Achenes fusiform to linear-oblancoate, with 5-9 ribs at maturity; plants not forming thorns by foreshortened stems; North America. (2)
 2. Clambering woody vine-like plants with recurved bifurcate, pseudostipulate spines. *Berylsimpsonia*
 2. Perennial herbs or rarely clambering shrubs without spines. ... (3)
3. Corollas yellow; shrubs, any new growth from persistent stems.
..... *Trizis* (s.s.)
3. Corollas white, pink or lavender; perennial herbs or suffruticose shrublets, any new growth from woody crowns or rhizomes. *Acourtia*

Berylsimpsonia B.L. Turner, *gen. nov.* TYPE SPECIES: *Berylsimpsonia vanillosma* (C. Wright) B.L. Turner (= *Proustia vanillosma* C. Wright).

Frutices scandentes, caules spinas pseudostipulares bipartitas ferentes, flosculi lutei zygomorphi, rami stylosum apicibus rotundatis, et achenia fusiformia 5-9-costata.

Clambering woody shrubs 1-5 m high. Stems persistent and producing bifurcate short pseudostipulate recurved persistent spines at each node. Leaves alternate, simple, the margins entire to serrulate, scarcely spinulose. Heads arranged in short leafy axillary cymes. Involucres turbinate, the bracts 3-4 seriate, graduate. Receptacle pubescent. Florets 3-6 per head, the corollas bilabiate, yellow. Achenes fusiform to narrowly oblanceolate in outline, pubescent with pilose or short glandular hairs, the pappus of numerous tawny barbellate bristles in 2-3 series.

Key to Species

1. Achenes mostly pilose throughout, rarely both pilose and glandular-pubescent. *B. crassinervis*
1. Achenes glandular-pubescent throughout, rarely a few pilose hairs present. *B. vanillosma*

Berylsimpsonia crassinervis (Urb.) B.L. Turner, *comb. nov.* BASIONYM: *Proustia crassinervis* Urb., *Symb. Ant.* 1:470. 1899. TYPE: HAITI: prope Payan, 400 m, *Picarda 949* (HOLOTYPE: B?). While type material for this name was not examined the original description leaves little doubt as to its inclusion here.

This weakly differentiated taxon is distinguished from *Berylsimpsonia vanillosma* primarily by its pilose achenes (vs. glandular-pubescent) and somewhat thicker leaves. Crisci (1974) did not recognize the taxon, placing it in synonymy under *Acourtia vanillosma* (C. Wright) Crisci.

So far as known it is confined to the Dominican Republic and closely adjacent Haiti (Fig. 1). Occasional plants have achenes with both pilose and short glandular-capitate hairs; because of this, future workers might reduce the taxon to varietal rank, although it is possible that such intermediates reflect *in situ* hybridization.

Berylsimpsonia vanillosma (C. Wright) B.L. Turner, *comb. nov.* BASIONYM: *Proustia vanillosma* C. Wright in Sauvage, *Anal. Acad. Ci. Habana* 6:212. 1860. *Perezia vanillosma* (C. Wright) Molt. & Gómez, *Anal. Soc. Hist. Nat. Madrid* 19:268. 1890. *Acourtia vanillosma* (C. Wright) Crisci, *J. Arnold Arb.* 55:605. 1974. TYPE: CUBA. w/o specific locality, w/o date, *C. Wright 9616* (HOLOTYPE: GH; Isotype: US!).

Proustia krugiana Urb., *Symb. Ant.* 1:471. 1899. TYPE: PUERTO RICO: "Coamo, in sylvis circa Farajones," 13 Dec 1885, *P. Sintenis 3039* (LECTOTYPE [selected here]: B; Isolectotype: US!). In his description Urban cited six separate collections by Sintenis (2920, 2989, 3038, 3039, 3258, 3598) all from Puerto Rico.

Proustia stenophylla Urb. & Ekman, *Ark. Bot.* 20A(5):65. 1926. TYPE: HAITI: "Massif de la Selle in Morne Cabaio in declivibus petrosis inter frutices, 2200-2300 m," w/o date, *Ekman 1596* (HOLOTYPE: B?). I have not examined type material; leaf descriptions and locality suggest that the name resides in synonymy here.

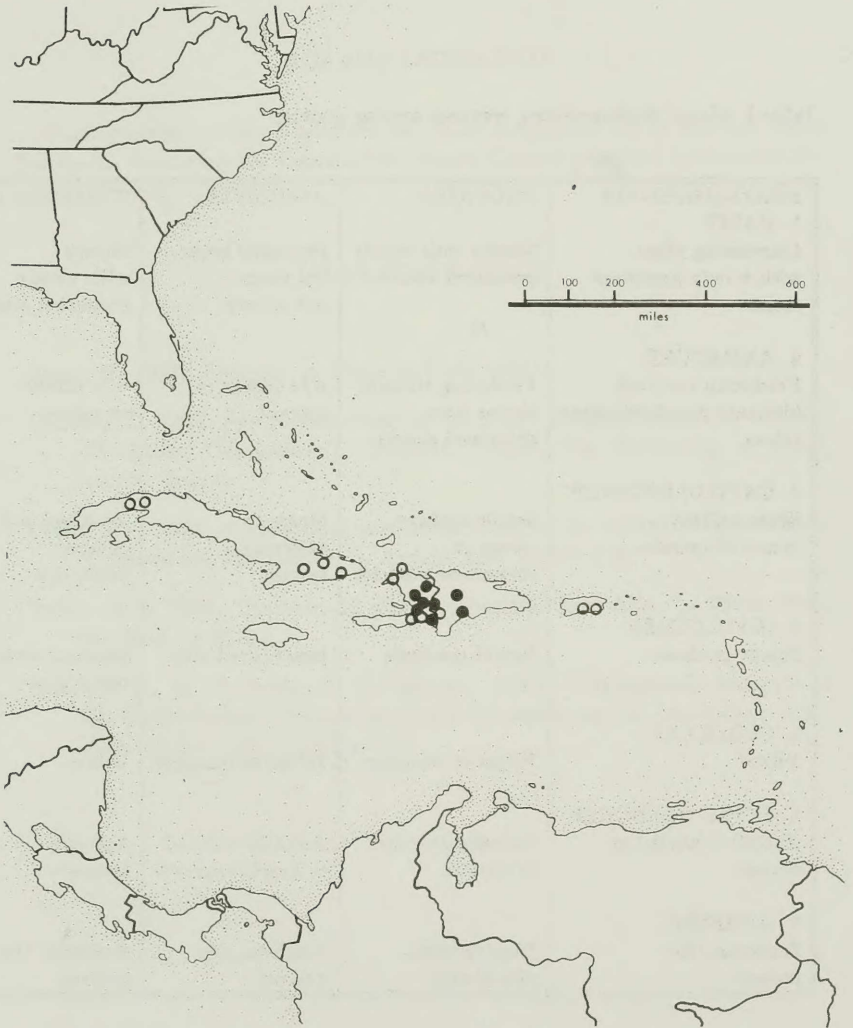


Fig. 1. Distribution of *Berylsimpsonia crassinervis* (closed circles) and *B. vanillosma* (open circles).

Table I. Major distinguishing features among genera.

<i>BERYLSIMPSONIA</i>	<i>PROUSTIA</i>	<i>ACOURTIA</i>	<i>TRIXIS</i> (s.s.)
1. HABIT Clambering vines with woody persistent stems	Shrubs with woody persistent stems	Perennial herbs, the stems not woody	Shrubs with woody persistent stems
2. ARMATURE Producing recurved bifurcate pseudostipulate spines	Producing straight thorns from shortened shoots	w/o thorns or spines	w/o thorns or spines
3. CAPITULESCENCE Short axillary cymes or cymules	Sessile axillary cymes or corymbose panicles	Single to variously cymose	Terminal and cymose, rarely not
4. INVOLUCRES Bracts graduate	Bracts graduate	Bracts graduate	Bracts 2-seriate, rarely not
5. COROLLAS Yellow	White to lavender	White to lavender	Yellow
6. STYLE BRANCHES Apically rounded or obtuse	Apically rounded or obtuse	Apically rounded to nearly truncate	Apically truncate
7. ACHENES Fusiform, ribs present	Obpyramidal, ribs absent	Fusiform, ribs present	Fusiform, ribs present

This species is amply described by Urban and yet others who have contributed to the floras of the area concerned (e.g., Alain 1962; etc.).

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